

What is claimed is:

1. A continuously variable transmission apparatus coupled to a drive source comprising: an input shaft rotatably
5 driven by the drive source; an output shaft for extracting power derived from rotation of the input shaft; and a toroidal-type continuously variable transmission and a planetary gear mechanism disposed between the input shaft and the output shaft,
10 wherein the toroidal-type continuously variable transmission has:
 - a pair of input side disks, each having inner and outer side surfaces and rotating together with the input shaft;
 - an output side disk having side surfaces, the side surface
15 being disposed concentrically with the respective input side disks around an intermediate section of the input shaft and being opposite to the inner side surfaces of the respective input side disks, and the output side disk being rotatable independently of the input side disks;
 - a trunnion interposed between the input side disk and
20 the output side disk and swinging around an axle twisted with respect to center axles of the disks;
 - a support shaft protruding from an inner side surface of the trunnion; and
 - a power roller interposed between the input side disk
25 and the output side disk while being rotatably supported by

the support shaft; and

the planetary gear mechanism has:

a sun gear;

a ring gear disposed around the sun gear;

5 a carrier supported concentrically with the sun gear and supported on one end section of the input shaft; and

a planetary gear interposed between the sun gear and the ring gear, rotatably supported by the carrier and engaged with the sun gear and the ring gear; and

10 wherein a plurality of projections are projected from a portion of the outer side surface of the one input side disk and provided at positions closer to the outside diameter than to the diameter of a pitch circle of a traction section, the traction section being a rolling contact section between the

15 inner side surface of the input side disk and a circumferential surface of the power roller and located areas close to the outermost diameter of an inside surface of the input side disk,

a plurality of engagement sections formed in a part of the carrier, and

20 transmission of power between the carrier and the one input side disk is carried out by coupling the plurality of projections with the plurality of engagement sections.

2. A continuously variable transmission apparatus
25 according to claim 1, wherein the plurality of projections are

provided radially outside than a circumscribed circle of a contact oval existing in the traction section.

3. A continuously variable transmission apparatus
5 according to claim 1, wherein the continuously variable transmission apparatus achieves the state of an infinite transmission ratio by stopping the output shaft while the input shaft is rotated.

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